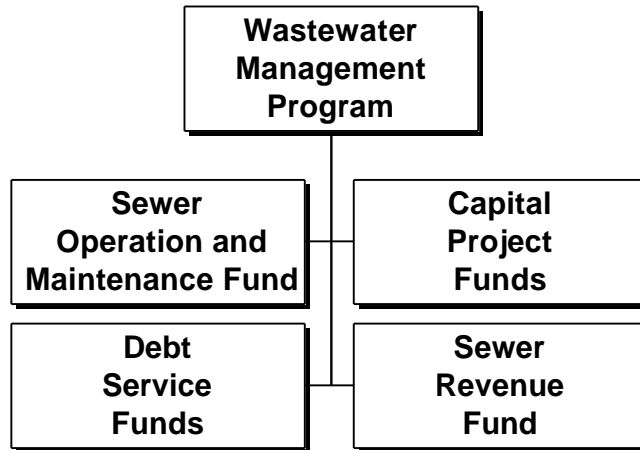


FUND 401

SEWER OPERATION AND MAINTENANCE



FUND 401

SEWER OPERATION AND MAINTENANCE

Agency Position Summary

352 Regular Positions / 351.5 Regular Staff Years

Position Detail Information

WASTEWATER ADMINISTRATION

1 Director
1 Admin. Assistant II
2 Positions
2.0 Staff Years

WASTEWATER COLLECTION

Collection Program

1 Director
1 Management Analyst III
1 Computer Systems Analyst II
1 Management Analyst II
2 Network/Telecom. Analysts I
1 Safety Analyst
1 Warehouse Supervisor
1 Warehouse Specialist
5 Admin. Assistants III
4 Admin. Assistants II
1 Laborer II
1 Supply Clerk
20 Positions
20.0 Staff Years

Gravity Sewers

1 Engineer IV
1 Engineer III
1 Maintenance Superintendent
1 Asst. Maintenance Superintendent
2 Senior Maintenance Supervisors
3 Senior Construction Supervisors
5 Maintenance Supervisors
1 Engineering Technician III
2 Engineering Technicians II
1 Construction Supervisor
1 Map Drafter
3 Engineering Technicians I
3 Heavy Equipment Operators
16 Labor Crew Chiefs
10 Engineering Aides
3 Motor Equipment Operators
4 Truck Drivers
12 Senior Utility Workers
19 Utility Workers
89 Positions
89.0 Staff Years

Pumping Stations

1 Engineer IV
1 Supervisor of Facilities Support
1 Industrial Electrician Supervisor
1 Instrumentation Supervisor
1 Pump Station Supervisor
1 Asst. Supervisor Engineering Inspector
1 Maintenance Superintendent
1 Engineer II
1 Industrial Electrician III
3 Instrumentation Technicians III
5 Pump Station Operators III
2 Industrial Electricians II
3 Plant Mechanics III
1 Engineering Technician II
3 Instrumentation Technicians II
1 Welder II
7 Pump Station Operators II
4 Plant Mechanics II
1 Plant Operator II
2 Engineering Aides
1 Maintenance Trade Helper II
1 Maintenance Trade Helper I
43 Positions
43.0 Staff Years

WASTEWATER TREATMENT

Noman M. Cole, Jr., Pollution Control Plant

1 Director
1 Programmer Analyst IV
1 Engineer IV
1 Engineer III
1 Engineer II
1 Safety Analyst
2 Network/Telecommunications Analysts I
1 Engineering Technician III
1 Warehouse Supervisor
1 Heavy Equipment Supervisor
2 Engineering Technicians II
1 Engineering Drafter
1 Administrative Assistants IV
1 Warehouse Specialist
3 Heavy Equipment Operators
3 Administrative Assistants III
1 Warehouse Worker-Driver
2 Storekeepers
25 Positions
25.0 Staff Years

FUND 401

SEWER OPERATION AND MAINTENANCE

Operations

1	Engineer IV
1	Engineer II
1	Plant Operations Superintendent
7	Plant Operations Supervisors
21	Plant Operators III
<u>37</u>	Plant Operators II
68	Positions
68.0	Staff Years

Maintenance

1	Engineer III
1	Plant Maintenance Superintendent
1	Industrial Electrician Supervisor
1	Instrumentation Supervisor
1	Plant Maintenance Supervisor
1	Chief Building Maintenance
3	Industrial Electricians III
3	Instrumentation Technicians III
1	Senior Maintenance Supervisor
4	Industrial Electricians II
6	Plant Mechanics III
5	Instrumentation Technicians II
2	Welders II
11	Plant Mechanics II
3	Painters I
1	Industrial Electrician I
1	Maintenance Trade Helper II
1	Senior Utility Worker
2	Utility Workers
2	Custodians II
<u>5</u>	Custodians I
56	Positions
56.0	Staff Years

WASTEWATER PLANNING & MONITORING

Financial Management and Planning

1	Director
1	Management Analyst IV
1	Management Analyst III
1	Programmer Analyst III
1	Accountant II
1	Management Analyst II
1	Programmer Analyst I
1	Engineering Technician II
3	Engineering Technicians I
2	Administrative Assistants III 1 PT
<u>3</u>	Administrative Assistants II
16	Positions
15.5	Staff Years

Engineering Analysis and Control

1	Engineer IV
1	Engineer III
1	Geog. Info. Spatial Analyst II
2	Geog. Info. System Technicians
4	Engineers II
2	Engineering Technicians III
<u>2</u>	Engineering Technicians II
13	Positions
13.0	Staff Years

Environmental Monitoring

1	Environmental Services Director
2	Asst. Environmental Services Directors
1	Environmental Health Supervisor
3	Environmental Health Specialists II
2	Environmental Technologists III
3	Environmental Technologists II
7	Environmental Technologists I
<u>1</u>	Administrative Assistant II
20	Positions
20.0	Staff Years

PT Denotes Part-Time Positions

FUND 401

SEWER OPERATION AND MAINTENANCE

Agency Mission

To safely collect and treat wastewater in compliance with all regulatory requirements using state-of-the-art technology in the most cost-effective manner in order to improve the environment and enhance the quality of life in Fairfax County.

Agency Summary					
Category	FY 2001 Actual	FY 2002 Adopted Budget Plan	FY 2002 Revised Budget Plan	FY 2003 Advertised Budget Plan	FY 2003 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	358/ 357.5	358/ 357.5	352/ 351.5	352/ 351.5	352/ 351.5
Expenditures:					
Personnel Services	\$17,685,390	\$20,222,135	\$19,174,311	\$21,141,130	\$21,141,130
Operating Expenses	39,163,520	40,914,006	46,447,537	42,653,792	42,653,792
Capital Equipment	584,981	750,185	1,512,118	721,784	721,784
Subtotal	\$57,433,891	\$61,886,326	\$67,133,966	\$64,516,706	\$64,516,706
Less:					
Recovered Costs	(\$723,573)	(\$678,104)	(\$678,104)	(\$690,666)	(\$690,666)
Total Expenditures	\$56,710,318	\$61,208,222	\$66,455,862	\$63,826,040	\$63,826,040

Summary by Cost Center					
Category	FY 2001 Actual	FY 2002 Adopted Budget Plan	FY 2002 Revised Budget Plan	FY 2003 Advertised Budget Plan	FY 2003 Adopted Budget Plan
Wastewater Administration	\$247,159	\$223,059	\$176,518	\$233,587	\$233,587
Wastewater Collection	9,636,842	11,152,550	11,767,433	11,384,688	11,384,688
Wastewater Treatment	15,451,508	17,546,169	16,968,584	18,640,806	18,640,806
Wastewater Planning and Monitoring	31,374,809	32,286,444	37,543,327	33,566,959	33,566,959
Total Expenditures	\$56,710,318	\$61,208,222	\$66,455,862	\$63,826,040	\$63,826,040

Board of Supervisors' Adjustments

The following funding adjustments reflect all changes to the FY 2003 Advertised Budget Plan, as approved by the Board of Supervisors on April 29, 2002:

- ◆ The Board of Supervisors made no changes to the FY 2003 Advertised Budget Plan.

The following funding adjustments reflect all approved changes to the FY 2002 Revised Budget Plan from January 1, 2002 through April 22, 2002. Included are all adjustments made as part of the FY 2002 Third Quarter Review:

- ◆ An increase of \$2,046,437 is primarily due to increased interjurisdictional payments from neighboring treatment plants for higher operating costs such as electricity, fuel oil, natural gas and cost of living adjustments to maintain competitive salaries for treatment plant employees.

FUND 401

SEWER OPERATION AND MAINTENANCE

County Executive Proposed FY 2003 Advertised Budget Plan

Purpose

To administer and operate the Wastewater Management Program including wastewater collection and conveyance, wastewater treatment, and monitoring program areas. The primary functions are to strategically plan, efficiently operate, and effectively maintain the Wastewater Management Program in the best interest of the County and its customers.

Key Accomplishments

- ◆ Reengineered the Wastewater Management Program along the departmental lines of business and established a Wastewater Leadership Team and a Wastewater Management Team.
- ◆ Achieved a 30 percent reduction in staff since 1996, without any adverse impact on service quality or the environment.
- ◆ Honored with the Association of Metropolitan Sewage Agencies (AMSA) Gold Award for complete and consistent compliance with the State of Virginia Pollutant Discharge Elimination System (VPDES) permit requirements while undergoing a major plant expansion and upgrade construction project.
- ◆ Operated the Noman M. Cole, Jr. Pollution Control Plant (NCPCP) in a manner that ensured it remained one of the lowest cost service providers in the region.
- ◆ Developed, trained and implemented information management system programs such as on-line requisitions and the Maintenance Management System to improve management efficiency and productivity.
- ◆ Reengineered plant operations to achieve greater flexibility in plant staffing.
- ◆ Initiated the "Odor Alert Program" which works with the community to identify and abate unacceptable odors from the NCPCP.
- ◆ Implemented the "Wastewater Operations Training Program" which is modeled after the Water Environment Federation plant operations, pump station operations, and activated sludge process training programs, for approximately 60 plant operations personnel.
- ◆ Established the Lorton Community Action Team (LCAT) which consists of members from the community, Wastewater Management Program, and Solid Waste Management Program to address community concerns.
- ◆ Completed the Geographical Information System (GIS) project to overlay the sanitary sewer information on the County's GIS platform.
- ◆ Completed the Gunston Cove Estuary and Stream Monitoring Program.

FUND 401

SEWER OPERATION AND MAINTENANCE

FY 2003 Initiatives

- ◆ Manage the Wastewater Management Program in such a manner as to maintain its Triple A bond rating and maintain its competitive sewer rates.
- ◆ Complete the construction of chemical addition facilities at locations throughout the County as identified in the System-wide Odor Control Study in order to reduce the generation of hydrogen sulfide gas in the sewer system.
- ◆ Continue the implementation of the Supervisory Control and Data Acquisition (SCADA) system to monitor and control the pumping stations from a remote location.
- ◆ Complete the interface between the Wastewater Collection Sanitary Sewer Maintenance Management System to the County's Geographical Information System.
- ◆ Continue the in-house wastewater operations training program to train and assess the competency of each operator per duty station.
- ◆ Establish multiple alliances with community-based organizations to improve customer relations for the agency.
- ◆ Continue training staff on the GIS system and fully interface with all related databases within the agency.

Performance Measurement Results

In FY 2001, there were 322,233 connections to the sanitary sewer system, an increase of 7,308 connections over FY 2000. Approximately 87 percent of Fairfax County households are connected to the sewer system. Based on the latest rate comparison, Fairfax County had the lowest annual sewer service charge and the third lowest availability fee in the Washington metropolitan region. The program is able to maintain its competitive rates while providing quality service to its customers, protecting the environment, and maintaining sufficient financial resources to fully fund the program's initiatives.

Funding Adjustments

The following funding adjustments from the FY2002 Revised Budget Plan are necessary to support the FY 2003 program:

- ◆ An increase of \$918,995 in Personnel Services associated with salary adjustments necessary to support the County's compensation program.
- ◆ An increase of \$1,720,000 in Operating Expenses results from an increase in interjurisdictional payments based on increased wastewater flows to neighboring jurisdictions for treatment as well as increased unit costs of chemicals required for treating wastewater.
- ◆ An increase of \$12,003 in Operating Expenses for Department of Vehicle Services charges based on anticipated charges for fuel, the County motor pool, vehicle replacement, and maintenance costs.
- ◆ A net decrease of \$2,296,282 in Operating Expenses includes a decrease of \$2,304,065 primarily for the carryover of one-time expenses from FY 2001 into FY 2002, partially offset by an increase of \$7,783 for Information Technology infrastructure charges based on the agency's historic usage and the Computer Equipment Replacement Fund (CERF) surcharge to provide for the timely replacement of the County's information technology infrastructure.

FUND 401

SEWER OPERATION AND MAINTENANCE

- ◆ An increase of \$12,562 in Recovered Costs is primarily due to the FY 2003 projected salaries of recoverable positions.
- ◆ Funding of \$721,784 in Capital Equipment to fund one additional Geographical Information System (GIS) color printer required to print large sewer maps of the Sanitary Sewer Maintenance Management System, and to replace 1 server, 1 backhoe, 13 trucks, 4 pumps, 1 generator, 2 vans, 1 loadlifter, and 1 backhoe. This equipment is recommended for replacement based on age, mileage, and repair cost considerations.

The following funding adjustments reflect all approved changes to the FY 2002 Revised Budget Plan since passage of the FY 2002 Adopted Budget Plan. Included are all adjustments made as part of the FY 2001 Carryover Review and all other approved changes through December 31, 2001:

- ◆ As part of the *FY 2001 Carryover Review*, a net increase of \$3,201,203 includes \$2,452,672 for encumbered items, \$425,406 for the implementation of the Geographical Information System (GIS) database in FY 2002 and \$323,125 associated with an unexpended balance of FY 2001 Close Management Initiatives (CMI) savings.
- ◆ In FY 2002, the County Executive approved a redirection of positions resulting in a decrease of 6/6.0 SYE positions for the Wastewater Treatment Division. There is no corresponding funding adjustment for these position redirections.

Objectives

- ◆ To control the number of sanitary sewer overflows and backups at a level of no more than 15 per 1,000 miles of sewer pipe annually through a preventative maintenance program of sewer inspection, cleaning, repair, and rehabilitation.
- ◆ To maintain all pumping stations, grinder pump stations, auxiliary equipment, controls, and accessories to ensure 100 percent reliability of force mains and pressure sewer systems; and to prevent pump station failures, overflows or backup conditions.
- ◆ To maintain the cost of service for wastewater treatment at an annual increase no greater than the total average costs of neighboring jurisdictions and to ensure that the plant's odor complaints are equal to or less than previous years' complaints from the surrounding neighborhoods.
- ◆ To ensure that there are no capacity problems in the system.
- ◆ To analyze NCPWP wastewater samples to ensure compliance with VPDES permit limits and obtain a satisfactory laboratory inspection by the State with an EPA rating of 95 percent or better.
- ◆ To monitor 17 industrial discharges for compliance with pretreatment requirements and prevent toxic discharges by monitoring and inspecting facilities at least twice a year, issuing discharge permits for significant industrial dischargers in the County, and issuing violation notices to County industries violating pretreatment regulations and requirements to ensure zero incidents of toxic effects on NCPWP operations or sludge quality.
- ◆ To monitor Treatment by Contract (TBC) costs of service to ensure costs are competitive with County cost of service and reflective of the degree of treatment being provided, with a target of less than 115 percent of NCPWP costs.

FUND 401

SEWER OPERATION AND MAINTENANCE

Performance Indicators

Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 1999 Actual	FY 2000 Actual	FY 2001 Estimate/Actual	FY 2002	FY 2003
Output:					
Miles of sewer line inspected	1,093	994	865 / 1,043	935	935
Pump station alarm responses	318	415	360 / 366	400	400
Million gallons of wastewater treated per day	41.50	42.80	46.10 / 42.79	46.30	48.39
Plans reviewed	592	545	500 / 456	500	500
Samples analyzed	79,971	80,446	80,000 / 89,526	90,000	90,000
Inspections made, pretreatment	176	48	50 / 48	50	50
Interjurisdictional flow (MGD) ¹	55.1	59.2	61.0 / 59.9	62.0	63.2
Efficiency:					
Cost per mile for TV inspection	\$824	\$895	\$870 / \$860	\$793	\$870
Pumping cost per million gallons/day	\$154	\$154	\$168 / \$160	\$176	\$180
Cost per million gallons treated	\$969	\$994	\$1,140 / \$1,061	\$1,075	\$1,057
Plans reviewed per employee	296	327	300 / 304	300	300
Cost per sample analysis	\$9.37	\$10.25	\$10.69 / \$10.37	\$11.66	\$12.12
Cost per year (pretreatment)	\$312,540	\$302,280	\$314,319 / \$351,429	\$358,050	\$371,294
Average interjurisdictional treatment cost per MG ²	969	\$1,042	\$1,207 / \$1,298	\$1,269	\$1,273
Service Quality:					
Compliance violations issued	0	0	0 / 0	0	0
Force main and pressure sewer system reliability	100%	100%	100% / 100%	100%	100%
Percent of odor-free days	93%	92%	95% / 93%	96%	96%
Percent of plans reviewed on time	100%	100%	100% / 100%	100%	100%
Sample analysis available on time	100%	100%	100% / 100%	100%	100%
Inspections completed on time (pretreatment)	100%	100%	100% / 100%	100%	100%
Percent of wastewater receiving full treatment	100%	100%	100% / 100%	100%	100%
Outcome:					
Backups/overflows per 1,000 miles	14	23	20 / 14	15	15
Pump station failures resulting in overflow, bypass or backup conditions	0	3	0 / 0	0	0
Odor complaints from surrounding neighbors	25	30	20 / 25	15	0
Annual Increase in Wastewater Treatment Costs for NCPCP:					
Total Annual Average Increase of Neighboring Jurisdictions	2% : (1%)	3% : 8%	7% : 25%	1% : (2%)	(2%) : .3%

FUND 401

SEWER OPERATION AND MAINTENANCE

Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 1999 Actual	FY 2000 Actual	FY 2001 Estimate/Actual	FY 2002	FY 2003
Imminent wastewater capacity problems	0	0	0 / 0	0	0
Percent accuracy within EPA	97%	97%	>90% / 97%	>90%	>95%
Incidents of toxic effects on NCPCP operations/sludge quality	0	0	0 / 0	0	0
Interjurisdictional treatment costs as a percentage of NCPCP treatment costs	112%	113%	<115% / 114%	<115%	<115%

¹ MGD = Million gallons per day

² MG = Million gallons

³ In FY 2003, approximately 87 percent of households in the County will be connected to sewer lines.



Wastewater Administration

Goal

To provide for the overall management of the Wastewater Management and Solid Waste Management programs, and to ensure that the office satisfies the County needs as they relate to the operation and maintenance of facilities supporting Wastewater Management and Solid Waste Management programs.

Cost Center Summary					
Category	FY 2001 Actual	FY 2002 Adopted Budget Plan	FY 2002 Revised Budget Plan	FY 2003 Advertised Budget Plan	FY 2003 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	2/ 2	2/ 2	2/ 2	2/ 2	2/ 2
Total Expenditures	\$247,159	\$223,059	\$176,518	\$233,587	\$233,587



Wastewater Collection

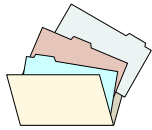
Goal

To operate, maintain, and repair the County's wastewater collection system in a manner that protects Fairfax County citizens and the environment.

Cost Center Summary					
Category	FY 2001 Actual	FY 2002 Adopted Budget Plan	FY 2002 Revised Budget Plan	FY 2003 Advertised Budget Plan	FY 2003 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	144/ 144	144/ 144	152/ 152	152/ 152	152/ 152
Total Expenditures	\$9,636,842	\$11,152,550	\$11,767,433	\$11,384,688	\$11,384,688

FUND 401

SEWER OPERATION AND MAINTENANCE

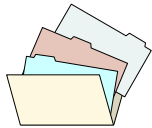


Wastewater Treatment

Goal

To ensure efficient and effective operation and maintenance of the County's wastewater treatment facilities within the laws and standards established by the Congress of the United States in Public Law 92-500 which designates regulatory powers to the U.S. Environmental Protection Agency (EPA) and the Virginia Department of Environmental Quality (DEQ).

Cost Center Summary					
Category	FY 2001 Actual	FY 2002 Adopted Budget Plan	FY 2002 Revised Budget Plan	FY 2003 Advertised Budget Plan	FY 2003 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	165/ 165	165/ 165	149/ 149	149/ 149	149/ 149
Total Expenditures	\$15,451,508	\$17,546,169	\$16,968,584	\$18,640,806	\$18,640,806



Wastewater Planning and Monitoring

Goal

To manage sewer revenue collection; to monitor and report County sewage flows treated at non-County facilities; to control, plan, and develop the Wastewater Management Program; and to environmentally monitor County treatment facilities, other publicly and privately-owned treatment facilities in the program, and nearby embayments.

Cost Center Summary					
Category	FY 2001 Actual	FY 2002 Adopted Budget Plan	FY 2002 Revised Budget Plan	FY 2003 Advertised Budget Plan	FY 2003 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	47/ 46.5	47/ 46.5	49/ 48.5	49/ 48.5	49/ 48.5
Total Expenditures	\$31,374,809	\$32,286,444	\$37,543,327	\$33,566,959	\$33,566,959

FUND 401

SEWER OPERATION AND MAINTENANCE

FUND STATEMENT

Fund Type G40, Enterprise Funds

Fund 401, Sewer Operation and Maintenance

	FY 2001 Actual	FY 2002 Adopted Budget Plan	FY 2002 Revised Budget Plan	FY 2003 Advertised Budget Plan	FY 2003 Adopted Budget Plan
Beginning Balance	\$10,181,965	\$56,230	\$5,666,012	\$84,030	\$84,030
Revenue:					
Miscellaneous Revenue ¹	\$67,039	\$70,000	\$70,000	\$0	\$0
Sale Surplus Property ¹	79,950	30,000	30,000	0	0
Sludge Incinerator Charges ¹	35,211	0	0	0	0
Total Revenue ¹	\$182,200	\$100,000	\$100,000	\$0	\$0
Transfer In:					
Sewer Revenue (400)	\$52,012,165	\$61,136,022	\$60,773,880	\$63,852,440	\$63,852,440
Total Transfer In	\$52,012,165	\$61,136,022	\$60,773,880	\$63,852,440	\$63,852,440
Total Available	\$62,376,330	\$61,292,252	\$66,539,892	\$63,936,470	\$63,936,470
Expenditures:					
Personnel Services	\$17,685,390	\$20,222,135	\$19,174,311	\$21,141,130	\$21,141,130
Operating Expenses	39,163,520	40,914,006	46,447,537	42,653,792	42,653,792
Recovered Costs	(723,573)	(678,104)	(678,104)	(690,666)	(690,666)
Capital Equipment	584,981	750,185	1,512,118	721,784	721,784
Total Expenditures	\$56,710,318	\$61,208,222	\$66,455,862	\$63,826,040	\$63,826,040
Total Disbursements	\$56,710,318	\$61,208,222	\$66,455,862	\$63,826,040	\$63,826,040
Ending Balance	\$5,666,012	\$84,030	\$84,030	\$110,430	\$110,430
PC Replacement Reserve ²	56,230	84,030	84,030	110,430	110,430
Unreserved Balance	\$5,609,782	\$0	\$0	\$0	\$0

¹ In an effort to keep all operating revenues for the Wastewater Management Program in one fund, the Miscellaneous Revenue and Sale of Surplus Property categories are transferred from this fund to Fund 400, Sewer Revenue. In addition, no revenue is anticipated from Sludge Incinerator Charges in FY 2003 since there is no treatment flow due to the closing of the DC correctional facility located in Lorton, Virginia in FY 2002.

² The PC Replacement Reserve was established for the timely replacement of computer equipment.